Name:

at1124exam: Radicals and Squares (v925)

Question 1

Simplify the radical expressions.

$$\sqrt{27} \qquad \sqrt{98} \qquad \sqrt{44}$$

Question 2

Find all solutions to the equation below:

$$2\left((x-4)^2+9\right) \;=\; 90$$

Question 3

By completing the square, find both solutions to the given equation. *You must show work for full credit!*

$$x^2 + 10x \;=\; -9$$

Question 4

Any quadratic function, with vertex at (h, k), can be expressed in vertex form:

$$y \;=\; a(x - h)^2 + k$$

A quadratic function is shown below in standard form.

$$y \;=\; 5x^2 + 40x + 71$$

Express the function in **vertex form** and identify the **location** of the vertex.